

REMARKS

Claims 1-18 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 3-7, 9-13, and 15-18 stand rejected under 35 U.S.C. § 103(a) in view of "Microsoft Device Driver for Symbios Logic ATA/ATAPI-to-1394 Controller Included in Microsoft's New NT5 Beta DDK Release, 10/6/1997," (referred to as Microsoft '997) and Harris et al., U.S. Pub. No. 2002/0081873 (referred to as Harris '873). This rejection is respectfully traversed.

Claim 7 recites the following limitations, identified for ease of reference by labels (a) to (d) as follows:

(a) "A host apparatus arranged to transmit commands to an external storage medium device connected to the host apparatus over an external databus which is arranged in accordance with one of the IEEE 1394 standard and the Universal Serial Bus standard, the host apparatus comprising: a command bus and a command interface arranged in accordance with one of the ATA/IDE standard and the Serial ATA standard for transmitting commands to a storage medium device over the command bus; and"

(b) "[the host apparatus comprising:] at least one integrated circuit chip connected to the command bus and having terminals for connection to the external databus."

(c) "the integrated circuit chip having an interface arranged to convert commands received from the command bus in a format in accordance with one of the ATA/IDE standard and the Serial ATA standard into a format in accordance with said one of the IEEE 1394 standard and the Universal Serial Bus standard, and"

(d) “[the interface arranged] to supply the converted commands to the terminals for connection to the external databus.”

The rejection of claim 7 under 35 U.S.C. § 103 is traversed for the reasons that:

(1) Microsoft ‘997 fails to teach or suggest the features of claim 7 set forth by the Examiner in section 3 of the Office Action (*see* Office Action, 10/27/2009, pp. 2-5), and
(2) Harris ‘973 fails to teach or suggest the features of claim 7 set forth by the Examiner in section 3 of the Office Action (*see* Office Action, 10/27/2009, pp. 2-5). These two points are addressed in turn in sections (1) and (2) that follow.

(1) Disclosure of Microsoft ‘997

In section 3, second paragraph of the present Office Action, the Examiner argues that Microsoft ‘997 discloses features (a), (b) and (d) of claim 7, as set forth above. *See* Office Action, 10/27/2009, pp. 2-3. The Examiner acknowledges, however, that Microsoft ‘997 does not teach or suggest feature (c). *See* Office Action, 10/27/2009, p. 3 (“Microsoft ‘997 does not appear to explicitly teach the integrated circuit chip having an interface arranged to convert commands received from the command bus in a format in accordance with one of the ATA/IDE standard and the Serial ATA standard into a format in accordance with said one of the IEEE 1394 standard and the Universal Serial Bus standard;”).

With respect to the Examiner’s argument regarding features (a), (b) and (d) of claim 7, a number of points, previously set forth in Applicant’s Response of August 24, 2009 regarding the Microsoft ‘997 reference, remain pertinent and are raised again here.

For example, Microsoft '997 is a press release regarding the SYM13FW500 controller made by Symbios Logic, Inc. As stated in the first paragraph, “[t]he SYM13FW500 controller … is a fully integrated single-chip solution that includes an integrated controller and PHY (physical interface).” Microsoft '997, p. 1. Thus, the SYM13FW500 controller at best appears to be a chip that is to be included in the storage medium device on the downstream side of the external IEEE 1394 databus.

The Microsoft '997 reference states: “Any ATA or ATAPI device can be made to look like a native 1394 SBP-2-compatible device through the use of this native 1394-to-ATA/ATAPI bridge.” Microsoft '997, p. 1. Again, the SYM13FW500 controller is arranged in the storage medium device on the downstream side of the external IEEE 1394 databus.

Further, the Microsoft '997 reference states: “Now, peripheral and system vendors using the ATA/ATAPI interface have an immediate and no-risk solution for adding 1394 solutions…” Microsoft '997, p. 1. In other words, the SYM13FW500 controller is incorporated in a “peripheral” that has an ATA/ATAPI interface, i.e. the external storage medium, not the host apparatus.

Thus, Microsoft '997 at best shows no more than an interface that is intended to be included in a storage medium device that is external to a host apparatus and connected to the downstream side of an external databus between the host apparatus and the storage medium device, not to the upstream side of the external databus within the host apparatus. By way of illustration, reference is made to the description of the prior art in the present application. Specifically, the SYM13FW500 controller of Microsoft '997 is equivalent to the prior art interface 15 shown in Figure 1 of the present

application and described on page 2, lines 3-12 of the specification as acknowledged prior art, and is similarly equivalent to the interface 40 in the described embodiment shown in Fig. 2 and described on page 11 and onwards.

Regarding feature (a) of claim 7, it is implicit that the SYM13FW500 controller of Microsoft '997 is intended to be used with a host apparatus within the scope of feature (a) connected to the upstream side of the 1394 databus referred to in Microsoft '997. However, in this regard, it should be noted that Microsoft '997 does not explicitly disclose such a host apparatus, and in particular, that Microsoft '997 does not teach providing the SYM13FW500 controller in the host apparatus. Instead, Microsoft '997 teaches providing the SYM13FW500 controller in the storage medium device, i.e. the "peripheral" mentioned on page 1 of Microsoft '997, as discussed above.

Regarding feature (b) of claim 7, Microsoft '997 does not in fact disclose feature (b) as argued by the Examiner in section 3 of the Office Action dated 10/27/2009. Feature (b) of claim 7 requires that the integrated circuit chip be "connected to the command bus [previously defined as the command bus of the host apparatus]." The SYM13FW500 controller of Microsoft '997 relied on by the Examiner as disclosing feature (b) is not, however, connected to the command bus of the host apparatus. For the reasons discussed above, the SYM13FW500 controller is within the storage medium device and connected to the downstream side of the 1394 databus.

Regarding feature (d) of claim 7, Microsoft '997 does not in fact disclose feature (d) as argued by the Examiner in section 3 of the Office Action dated 10/27/2009. Feature (d) requires that the interface be arranged to "supply the converted commands to the terminals for connection to the external databus." For disclosure of feature (d),

the Examiner relies on the external PHY interface of the SYM13FW500 controller that is for connection to the 1394 interface. See Office Action, 10/27/2009, p. 3. Applicant respectfully notes that the Examiner's argument is not correct because the requirement to supply "converted commands" is clearly a requirement to supply commands converted by the interface recited in feature (c). Given that feature (c) is not disclosed by Microsoft '997, as acknowledged by the Examiner (see Office Action, 10/27/2009, p. 3), it follows that feature (d), that requires supply of commands produced by the interface of feature (c), is also not disclosed by Microsoft '997.

Furthermore, it is noted that Microsoft '997 does not teach or suggest that the SYM13FW500 controller converts commands "in a format in accordance with one of the ATA/IDE standard and the Serial ATA standard into a format in accordance with said one of the IEEE 1394 standard and the Universal Serial Bus standard" as recited by claim 7.

As stated in Applicant's previous response of August 24, 2009, in communication between a host apparatus and a storage medium device in accordance with either the ATA/IDE standard or the Serial ATA standard, while the transfer of data is bidirectional, the transfer of commands is unidirectional. In other words, commands are transmitted only from the host apparatus to the storage medium device. Commands are never transmitted from the storage medium device to the host apparatus. This is an express part of the ATA/IDE standard and the Serial ATA standard. As such, the host apparatus controls the storage medium device and not vice versa.

Thus, the SYM13FW500 controller converts commands in the opposite direction to that required by claim 7. This is explicitly stated in Microsoft '997 as follows: "The

SYM13FW500 controller accepts native 1394 commands and translates them to ATA/ATAPI commands.” Microsoft ‘997, p. 1. There is no disclosure in Microsoft ‘997 of a command being converted in the direction required by claim 7, i.e., from ATA/IDE standard or Serial ATA standard into IEEE 1394 standard or USB standard, because the SYM13FW500 controller is in the storage medium device on the downstream side of the external databus and only converts commands (from 1394 standard to ATA) in the opposite direction to that required by claim 7.

Since the SYM13FW500 controller of Microsoft ‘997 does not convert commands “in a format in accordance with one of the ATA/IDE standard and the Serial ATA standard into a format in accordance with said one of the IEEE 1394 standard and the Universal Serial Bus standard” as recited by claim 7, it follows that Microsoft ‘997 does not disclose feature (d) which requires the interface to supply the “converted commands” by the interface to the terminals for connection to the external databus.

For these reasons, Microsoft ‘997 does not teach or suggest the features of claim 7 as argued by the Examiner in Section 3 of the Office Action of 10/27/2009. As set forth above, in fact the entirety of the features (b), (c) and (d) are not disclosed by Microsoft ‘997.

(2) Disclosure of Harris ‘873

The Examiner argues that feature (c) of claim 7, although not disclosed by Microsoft ‘997, is taught by Harris ‘973. See Office Action, 10/27/2009, p. 3. Further, the Examiner argues that it would be obvious in view of Harris ‘973 to modify Microsoft

'997 to include feature (c) of claim 7. The Examiner's argument is respectfully traversed for the reason that Harris does not in fact disclose feature (c) of claim 7.

For disclosure of feature (c) of claim 7, the Examiner relies on the description in Harris '873 of the bridging chip 100 in paragraph [0016], which states as follows:

"Referring to FIG. 2, according to one embodiment of this invention, a secondary board (or bridging device) 25 includes a bridging circuit to convert ATA/ATAPI signals from a mass storage device motherboard 20 into USB signals. The secondary board 25 preferably utilizes a bridging chip 100 to provide the bridging circuit."

However, it is clear from Figure 2 of Harris '873 that the bridging chip 100 is on the same side of the USB databus as the mass storage device, which is the opposite side of the USB databus from the host device, i.e. the downstream side of the USB databus. This is analogous to the SYM13FW500 controller of Microsoft '997 being on the downstream side of the 1394 databus as discussed above.

As such, the disclosure in Harris '873 to "convert ATA/ATAPI signals from a mass storage device motherboard 20 into USB signals" is simply a disclosure to convert data signals, not commands.

As already discussed with regard to Microsoft '997 above, in communication between a host apparatus and a storage medium device in accordance with either the ATA/IDE standard or the Serial ATA standard, while the transfer of data is bidirectional, the transfer of commands is unidirectional. In other words, commands are transmitted only from the host apparatus to the storage medium device. Commands are never transmitted from the storage medium device to the host apparatus. This is an express part of the ATA/IDE standard and the Serial ATA standard. As such, the host apparatus controls the storage medium device and not vice versa.

Thus, the disclosure in Harris '873 relied upon by the Examiner, i.e., "a bridging circuit to convert ATA/ATAPI signals from a mass storage device motherboard 20 into USB signals" is not a disclosure to convert commands, because commands are never sent from the mass storage device to the host apparatus via the USB databus.

Further, Harris '873 is silent with respect to commands sent from the host apparatus over the USB databus to the bridging chip 100. However, it is implicit that to perform its bridging function, the bridging chip 100 converts commands sent from the host apparatus over the USB databus from USB commands to ATA/ATAPI commands, that is in the opposite direction to that required by claim 7.

For at least these reasons, Harris '873 does not disclose feature (c) of claim 7. Further, it follows that it cannot be obvious in view of Harris '873 to modify Microsoft '997 in the manner suggested by the Examiner.

More generally concerning obviousness, it is noted that the Examiner has now relied on four different references as disclosing features (b), (c) and (d) of claim 7, namely:

- (1) Hatano '045 (U.S. Pub. 2002/0002645) in the Office Action dated June 6, 2008, paragraph 8;
- (2) Jacobs '788 (U.S. Pat. No. 6,618,788) in the Office Action dated December 10, 2008, paragraph 4;
- (3) Microsoft '997 in the Office Action dated June 23, 2009, paragraph 3; and
- (4) Harris '873 in the present Office Action dated 10/27/2009.

However, the present invention is distinguished over each of these documents for essentially the same reason, namely that features (b), (c) and (d) are not disclosed

in any of the references because they each relate to an integrated circuit chip for inclusion on the downstream side of the USB or 1394 databus that has an interface arranged to convert commands from USB or 1394 to ATA. It is submitted that this history is evidence that the present invention is not in fact obvious to one of ordinary skill in the art.

For at least these reasons, claim 7 defines over the prior art. Limitations similar to those discussed above with respect to claim 7 are also recited by claims 1 and 13, which likewise define over the prior art. Claims 3-6, 9-12, and 15-18 depend either directly or indirectly from one of claims 1, 7, or 13 and likewise define over the prior art. Reconsideration and withdrawal of the rejections are respectfully requested.

Claims 2, 8, and 14 stand rejected under 35 U.S.C. § 103(a) in view of "Microsoft Device Driver for Symbios Logic ATA/ATAPI-to-1394 Controller Included in Microsoft's New NT5 Beta DDK Release, 10/6/1997," Harris et al. (U.S. Pub. No. 2002/0081873), and Hatano (U.S. Pub. No. 2002/0002645). This rejection is respectfully traversed.

Claims 2, 8, and 14 depend from claims 1, 7, and 13, respectively, which define over the prior art as discussed in detail above. For at least the above reasons, claims 2, 8, and 14 likewise define over the prior art. Reconsideration and withdrawal of the rejections are respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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